

(FILE 'HOME' ENTERED AT 12:16:23 ON 03 NOV 2005)

FILE 'AGRICOLA, MEDLINE, CAPLUS, BIOSIS' ENTERED AT 12:16:26 ON 03 NOV 2005

L1	11349 S (NEUTRAL (1N) ENDOPEPTIDASE) OR NEP OR NEPRILYSIN
L2	900 S L1 AND (MUS OR MOUSE)
L3	323 S L2 AND (CDNA OR CLON? OR GENE)
L4	105 S L3 AND PY<1999
L5	69 DUP REM L4 (36 DUPLICATES REMOVED)
L6	0 S L5 AND 765

L6 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1993:186782 CAPLUS
DN 118:186782
TI Murine common acute lymphoblastic leukemia antigen (CD10 neutral
endopeptidase 24.11). Molecular characterization, chromosomal
localization, and modeling of the active site
AU Chen, Chang Yan; Salles, Gilles; Seldin, Michael F.; Kister, Alexander E.;
Reinherz, Ellis L.; Shipp, Margaret A.
CS Lab. Immunobiol., Harvard Med. Sch., Boston, MA, 02115, USA
SO Journal of Immunology (1992), 148(9), 2817-25
CODEN: JOIMA3; ISSN: 0022-1767
DT Journal
LA English
AB To further analyze antigen CD10/neutral endopeptidase 24.11 CD10/NEP]
function in lymphoid and nonlymphoid cells using well characterized murine
systems, the murine CD10/NEP homolog was isolated, its chromosomal
location was determined and the enzyme active site was modeled. The murine
CD10/NEP cDNA predicts a 750-amino acid (aa) type II integral
membrane protein with 90% identity to the human CD10 sequence and 100%
conservation of critical aa and functional motifs. The latter include the
pentapeptide consensus sequence required for zinc binding and catalytic
activity, addnl. aa associated with substrate binding, and the extracellular
cysteines that participate in disulfide bonds required for enzymic
activity. Like its human homolog, murine CD10/NEP has multiple
alternative 5'-untranslated region sequences. The gene is localized on
the proximal half of murine chromosome 3. In Northern anal., murine
CD10/NEP transcripts are abundant in bone marrow stromal cells that
support pre-B cell differentiation but are undetectable in representative
Abelson transformed pre-B cell lines. The murine CD10/NEP active site was
modeled by aligning critical conserved CD10/NEP residues with comparable
residues in the active site of thermolysin, a bacterial metalloprotease
with similar substrate specificity. The model predicts that the 2 enzymes
have similar clefts that comprise the active site and permit
zinc-dependent substrate interactions.

L6 ANSWER 8 OF 12 MEDLINE on STN DUPLICATE 4
AN 93390947 MEDLINE
DN PubMed ID: 8397369
TI NEP: a novel receptor-like tyrosine kinase expressed in proliferating neuroepithelia.
AU Zerlin M; Julius M A; Goldfarb M
CS Department of Biochemistry and Molecular Biophysics, Columbia University College of Physicians and Surgeons, New York, New York 10032.
SO Oncogene, (1993 Oct) 8 (10) 2731-9.
Journal code: 8711562. ISSN: 0950-9232.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199310
ED Entered STN: 19931105
Last Updated on STN: 19931105
Entered Medline: 19931018
AB We have isolated a murine **cdna**, *nep*, which encodes a novel receptor-like protein tyrosine kinase. The kinase region of NEP protein bears 50% amino acid sequence identity to the neurotrophin receptors (TRKs). While the intracytoplasmic portion of NEP also contains a short kinase insert region and C-terminal tail reminiscent of the TRK proteins, the putative extracellular domain of NEP is unrelated to any known proteins. The *nep* gene is strongly expressed within proliferating neuroepithelia of **mouse** embryos, commencing at the early somite stage (embryonic day 8.0) and persisting in the proliferative ventricular zones of the brain and spinal cord, suggesting that one function of NEP kinase is to signal proliferation of neuroepithelial cells in response to an as yet unknown ligand. The *nep* gene is also expressed in embryonic sensory ganglia, striated muscle and epidermis, as well as in several adult tissues, including the ventricle linings and glia subpopulations in the brain.

Neutral endopeptidase modulation of septic shock.

AU Lu B; Gerard N P; Kolakowski L F Jr; Bozza M; Zurakowski D; Finco O;
Carroll M C; Gerard C

CS Ina Sue Perlmutter Laboratory, Children's Hospital, Boston, Massachusetts,
USA.

NC HL19170 (NHLBI)
HL51366 (NHLBI)

SO Journal of experimental medicine, (1995 Jun 1) 181 (6) 2271-5.
Journal code: 2985109R. ISSN: 0022-1007.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199506

ED Entered STN: 19950707
Last Updated on STN: 19950707
Entered Medline: 19950623

AB Neutral endopeptidase (NEP; EC. 3.4.24.11) is a type 2 cell surface metalloprotease known by a variety of eponyms, including enkephalinase, common acute lymphoblastic leukemia antigen, and CD10. Identified substrates are largely neural or humoral oligopeptide agonists, and the enzyme functions to terminate signaling by degrading the ligand, analogously to acetylcholine/acetylcholinesterase. Targeted disruption of the **NEP** locus in **mice** results in enhanced lethality to endotoxin shock with a pronounced gene dosage effect. The site(s) of action appears downstream from release of tumor necrosis factor and interleukin-1 since NEP-deficient animals demonstrate increased sensitivity to these mediators as well. This unexpected finding indicates an important protective role for NEP in septic shock.

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635 640 645

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Leu Ala Asp Asn Gln Asn Val Asn Gly Phe Ser Thr Leu Gly Glu Asn
650 655 660

att gcc gac aac gga ggt gtg cga cag gca tac aag gct tac cta cgg 2368
Ile Ala Asp Asn Gly Gly Val Arg Gln Ala Tyr Lys Ala Tyr Leu Arg
665 670 675

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Trp Leu Ala Asp Gly Gly Lys Asp Gln Arg Leu Pro Gly Leu Asn Leu
680 685 690 695

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745 750 755

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760 765

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Leu	Arg	Asp	Ser	Ser	Leu	Lys	Ser	Asp	Ile	Cys	Thr	Thr	Pro	Ser	Cys	
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Val	Ile	Ala	Ala	Ala	Arg	Ile	Leu	Glu	Asn	Met	Asp	Gln	Ser	Arg	Asn	
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Pro	Cys	Glu	Asn	Phe	Tyr	Gln	Tyr	Ala	Cys	Gly	Gly	Trp	Leu	Arg	His	
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His	Val	Ile	Pro	Glu	Thr	Asn	Ser	Arg	Tyr	Ser	Val	Phe	Asp	Ile	Leu	
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Phe Pro Asp Glu Glu Val Val Val Tyr Gly Ile Pro Tyr Leu Glu Asn
355 360 365

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370 375 380

Leu Val Trp Arg Leu Val Leu Asp Arg Ile Gly Ser Leu Ser Gln Arg
385 390 395 400

Phe Lys Glu Ala Arg Val Asp Tyr Arg Lys Ala Leu Tyr Gly Thr Thr
405 410 415

Val Glu Glu Val Arg Trp Arg Glu Cys Val Ser Tyr Val Asn Ser Asn
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Met Glu Ser Ala Val Gly Ser Leu Tyr Ile Lys Arg Ala Phe Ser Lys
435 440 445

Asp Ser Lys Ser Thr Val Arg Glu Leu Ile Glu Lys Ile Arg Ser Val
450 455 460

Phe Val Asp Asn Leu Asp Glu Leu Asn Trp Met Asp Glu Glu Ser Lys
465 470 475 480

Lys Lys Ala Gln Glu Lys Ala Met Asn Ile Arg Glu Gln Ile Gly Tyr
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Pro Asp Tyr Ile Leu Glu Asp Asn Asn Lys His Leu Asp Glu Glu Tyr
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Ser Ser Leu Thr Phe Tyr Glu Asp Leu Tyr Phe Glu Asn Gly Leu Gln
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Asn Leu Lys Asn Asn Ala Gln Arg Ser Leu Lys Lys Leu Arg Glu Lys
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Val Asp Gln Asn Leu Trp Ile Ile Gly Ala Ala Val Val Asn Ala Phe
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Tyr Ser Pro Asn Arg Asn Gln Ile Val Phe Pro Ala Gly Ile Leu Gln
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Ile Gly Met Val Ile Gly His Glu Ile Thr His Gly Phe Asp Asp Asn
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Gly Arg Asn Phe Asp Lys Asn Gly Asn Met Leu Asp Trp Trp Ser Asn
610 615 620

Phe Ser Ala Arg His Phe Gln Gln Gln Ser Gln Cys Met Ile Tyr Gln

